AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) ~~Method~~ A method for estimating from an input signal the resonance frequencies of a system modelled as a source and a filter, the method comprising ~~the steps of~~ :

[[-]] determining the Z-transform of said input signal [[,]] ;

[[-]] calculating the differential-phase spectrum of said Z-transformed input signal, said Z-transform thereby being evaluated on a circle centered around the origin of the Z-plane[[,]] ;

[[-]] detecting the peaks on said differential-phase spectrum [[,]] ;

[[-]] attributing said peaks to either said source or said filter [[,]] ; and

[[-]] estimating said resonance frequencies from said peaks.

2. (Currently amended) The method ~~Method~~ for estimating the resonance frequencies as in claim 1, wherein said circle is different from the unit circle in the Z-plane.

3. (Currently amended) The method ~~Method~~ for estimating the resonance frequencies as in ~~claims 1 or 2~~ claim 1, wherein said Z-transform of said input signal is evaluated on more than one circle.

4. (Currently amended) The method ~~Method~~ for estimating the resonance frequencies as in ~~any of the previous claims~~ claim 1, wherein said input signal is windowed.

5. (Currently amended) The method ~~Method~~ for estimating the resonance frequencies as in ~~any of the previous claims~~ claim 1, wherein said input signal is a speech signal.

6. (Currently amended) The method ~~Method~~ for estimating the resonance frequencies as in ~~any of the previous claims~~ claim 1, wherein said source is a glottal flow signal.

7. (Currently amended) The method ~~Method~~ for estimating the resonance frequencies as in ~~any of the previous claims~~ claim 1, wherein said filter is a vocal tract system.

8. (Currently amended) The method ~~Method~~ for estimating the resonance frequencies as in ~~any of the previous claims~~ claim 1, wherein ~~the step of~~ attributing said peaks is performed based on the sign of said peaks.

9. (Currently amended) The method ~~Method~~ for estimating the resonance frequencies as in claim 8, wherein ~~said step of~~ attributing is further based on the radius of said circle.

10. (Currently amended) The method ~~Method~~ for estimating the resonance frequencies as in ~~any of the previous claims~~ claim 1, further comprising ~~the step of~~ removing zeros of said input signal's Z-transform before performing ~~the step of~~ calculating said differential-phase spectrum.

11. (Currently amended) ~~A program, executable on a programmable device containing~~ A computer usable medium having computer readable program code embodied therein for estimating from an input signal the resonance frequencies of a system modeled as a source and a filter, the computer readable code comprising instructions~~, which, when executed, perform the method as in any of the previous claims.~~ for:

determining the Z-transform of said input signal;

calculating the differential-phase spectrum of said Z-transformed input signal, said Z-transform thereby being evaluated on a circle centered around the origin of the Z-plane;

detecting the peaks on said differential-phase spectrum;

attributing said peaks to either said source or said filter; and

estimating said resonance frequencies from said peaks.